

TITLE: A Typology-Based Evaluation of HIV Risk-Behavior Modification Interventions for Street-Based Injecting Drug Users—The National AIDS Demonstration Research (NADR) Study

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BACKGROUND/OBJECTIVES: Injection drug use (IDU) is implicated in the transmission of HIV through the sharing of contaminated injection equipment, and through disinhibiting sexual practices, both of which vary with the type of drugs used. Considering this heterogeneity amidst the injecting drug user population, a comprehensive HIV-risk behavioral typology was developed (findings discussed in another abstract). The six-group typology consisted of: 1) three male types including one homosexual/bisexual type and two heterosexual types, 2) two female types, and 3) one male and female low sexual activity type. The purpose of this research was to examine for patterns in the effectiveness of behavior modification programs (NADR interventions) in changing drug use, needle use, and sexual behaviors of different behavioral types of IDUs, and to compare for differential effects of intervention programs between the IDU types.

METHODS: For within group assessment, a one-group pretest-posttest design was selected, and the Wilcoxon Matched-Pairs Sign Rank test ($p < 0.0001$) was used. For between group comparisons, a formula was developed to obtain a change score for each behavioral variable examined, which was then used in Oneway ANOVA with the SNK posthoc comparison test for multiple groups ($p < 0.05$). The change score calculates percent change relative to baseline for each IDU type, thereby accounting for the differences in the level of risk behavior.

RESULTS: Within group comparisons were done to determine if the derived IDU types demonstrated different patterns of behavior change after exposure to NADR interventions. Differences in change in drug use behaviors were seen between IDU types who primarily injected a single drug versus those who primarily injected multiple drugs, while all IDU types showed the same pattern of change in their use of dirty needles, and new/clean needles. Also, a higher proportion of IDUs who had multiple partners increased their use of condoms as compared to IDUs who had one steady partner. Between group comparisons were done to test for differential effects of the NADR interventions on the derived IDU types. A significant difference in change in frequency of cocaine injection (39% vs. 13%), and frequency of sharing dirty needles (42% vs. 17%) was observed between IDU types. There were also significant differences in change in condom use behavior for the various forms of sexual practices, between high and moderate risk heterosexual male IDU types (18-28% vs. 4-15%), and high and moderate risk heterosexual female IDU types (9-18% vs. 9-12%).

CONCLUSIONS: The varying levels of program effectiveness identified indicates the benefits of a typological approach to evaluation as against a standard, black-box evaluation, and provide information for the planning of innovative, targeted typespecific behavioral interventions for the future.

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